

**INFORMATION DISCLOSURE STATEMENT LISTING SHEET**

**Information Cited By Applicant(s) That May Be Material To  
The Prosecution Of The Subject Application**

Applicants: George et al. Attorney Docket No. BIOL0119

Serial No.: 10/593,018 Group Art Unit: 1645

Filed: October 22, 2008 Examiner:

Confirmation No. 5725

Title: IMAGE BASED QUANTITATION OF MOLECULAR TRANSLOCATION

**U.S. PATENT DOCUMENTS**

*NONE CITED*

**FOREIGN PATENT DOCUMENTS**

*NONE CITED*

**OTHER INFORMATION**

- \_\_\_\_\_ 01 Hecht, Eugene. "Optics 4<sup>th</sup> ed." Addison-Wesley Longman, Inc., XP-002465391, ISBN: 0-8053-8566-5, 2002.
- \_\_\_\_\_ 02 Hultdin et al., "Telomere analysis by fluorescence *in situ* hybridization and flow cytometry," *Nucleic Acids Research* Vol. 26, No. 16: 3651-3656, August 15, 1998.
- \_\_\_\_\_ 03 Kubota et al., "Flow Cytometer and Imaging Device Used in Combination." *Cytometry* 21: 129-132, 1995.
- \_\_\_\_\_ 04 Kubota, Fumio. "Analysis of red cell and platelet morphology using an imaging-combined flow cytometer." *Clin. Lab. Haem.* 25: 71-76, 2003.
- \_\_\_\_\_ 05 Lauzon et al., "Flow Cytometric Measurement of Telomere Length," *Cytometry* 42: 159-164, June 2000.
- \_\_\_\_\_ 06 Levron et al., "Sperm chromosome abnormalities in men with severe male factor infertility who are undergoing in vitro fertilization with intracytoplasmic sperm injection," *Fertility and Sterility* Vol. 76, No. 3: 479-484, September 2001.

## OTHER INFORMATION

\_\_\_\_\_ 07 Lowe et al., "Aneuploid epididymal sperm detected in chromosomally normal and Robertsonian translocation-bearing mice using a new three-chromosome FISH method," *Chromosoma* 105: 204-210, 1996.

\_\_\_\_\_ 08 Majno et al., "Apoptosis, Oncosis, and Necrosis *An Overview of Cell Death*," *American Journal of Pathology* Vol. 146, No. 1: 3-15, January 1, 1995.

\_\_\_\_\_ 09 Martin et al., "Detection of aneuploidy in human interphase spermatozoa by fluorescence in situ hybridization (FISH)," *Cytogenetics and Cell Genetics* 64: 23-26, 1993.

\_\_\_\_\_ 010 Nautiyal et al., "17 $\beta$ -Estradiol induces nuclear translocation of CrkL at the window of embryo implantation," *Biochemical and Biophysical Research Communications* 318: 103-112, 2004.

\_\_\_\_\_ 011 Ong, Sim Heng, "Development of a System for Imaging and Classifying Biological Cells in a Flow Cytometer," Doctor of Philosophy Thesis, University of Sydney, School of Electrical Engineering, August, 1985.

\_\_\_\_\_ 012 Ong et al., "Development of an Image Flow Cytometer," *Analytical and Quantitative Cytology and Histology*. XIVth International Conference on Medical and Biological Engineering and the VIIth International Conference on Medical Physics, Finland: 375-382, August 1987.

\_\_\_\_\_ 013 Ong et al., "Optical Design in a Flow System For Imaging Cells," *Sciences in Medicine*, Vol. 14, No. 2: 74-80, 1991.

\_\_\_\_\_ 014 Ong et al., "Analysis of MTF Degradation in the Imaging of Cells in a Flow System," *International Journal of Imaging Systems & Technology* 5: 243-250, 1994.

\_\_\_\_\_ 015 Ortyn et al., "Extended Depth of Field Imaging for High Speed Cell Analysis" *Cytometry Part A* 71A: 215-231, 2007.

\_\_\_\_\_ 016 Pala et al., "Flow cytometric measurement of intracellular cytokines," *Journal of Immunological Methods* 243: 107-124, 2000.

\_\_\_\_\_ 017 Pang et al., "Detection of aneuploidy for chromosomes 4, 6, 7, 8, 9, 10, 11, 12, 13, 17, 18, 21, X and Y by fluorescence in-situ hybridization in spermatozoa from nine patients with oligoasthenoteratozoospermia undergoing intracytoplasmic sperm injection," *Human Reproduction* Vol. 14, No. 5: 1266-1273, 1999.

\_\_\_\_\_ 018 Patterson et al., "Detection of HIV-1 DNA and Messenger RNA in Individual Cells by PCR-Driven in Situ Hybridization and Flow Cytometry," *Science* 260: 976-979, May 14, 1993.

\_\_\_\_\_ 019 Perreault et al., "The Role of Disulfide Bond Reduction during Mammalian Sperm Nuclear Decondensation *in Vivo*," *Developmental Biology* 101: 160-167, 1984.

## OTHER INFORMATION

\_\_\_\_\_ O20 Pinkel et al., "Cytogenetic analysis using quantitative, high sensitivity, fluorescence hybridization," *Proceedings of the National Academy of Sciences: Genetics* 83: 2934-2938, 1986.

\_\_\_\_\_ O21 Pollice et al., "Sequential Paraformaldehyde and Methanol Fixation for Simultaneous Flow Cytometric Analysis of DNA, Cell Surface Proteins, and Intracellular Proteins," *Cytometry* 13: 432-444, 1992.

\_\_\_\_\_ O22 Ried et al., "Simultaneous visualization of seven different DNA probes by *in situ* hybridization using combinatorial fluorescence and digital imaging microscopy," *Proceedings of the National Academy of Sciences: Genetics* 89: 1388-1392, February 1992.

\_\_\_\_\_ O23 Robbins et al., "Aneuploidy in sperm of Hodgkin's disease patients receiving NOVP chemotherapy," *The American Journal of Human Genetics* Vol. 55, No. 3 – Supplement: A68 (371), September 1994.

\_\_\_\_\_ O24 Robbins et al., "Detection of Aneuploid Human Sperm by Fluorescence In Situ Hybridization: Evidence for a Donor Difference in Frequency of Sperm Disomic for Chromosomes I and Y," *The American Journal of Human Genetics*, 52: 799-807, 1993.

\_\_\_\_\_ O25 Robbins et al., "Three-probe Fluorescence *in situ* Hybridization to Assess Chromosome X, Y, and 8 Aneuploidy in Sperm of 14 Men from Two Healthy Groups: Evidence for a Paternal Age Effect on Sperm Aneuploidy," *Reproduction, Fertility and Development* 7: 799-809, 1995.

\_\_\_\_\_ O26 Robbins et al., "Use of Fluorescence In Situ Hybridization (FISH) To Assess Effects of Smoking, Caffeine, and Alcohol on Aneuploidy Load in Sperm of Healthy Men," *Environmental and Molecular Mutagenesis* 30: 175-183, 1997.

\_\_\_\_\_ O27 Rufer et al., "Telomere length dynamics in human lymphocyte subpopulations measured by flow cytometry," *Nature Biotechnology* 16: 743-747, August 1998.

\_\_\_\_\_ O28 Salzman et al., "Light Scatter: Detection and Usage," *Current Protocols in Cytometry* Supplement 9: 1.13.1-1.138.8, 1999.

\_\_\_\_\_ O29 Satoh et al., "Small Aggregates of Platelets Can Be Detected Sensitively by a Flow Cytometer Equipped With an Imaging Device: Mechanisms of Epinephrine-Induced Aggregation and Antiplatelet Effects of Beraprost," *Cytometry* 48: 194-201, 2002.

\_\_\_\_\_ O30 Schmid et al., "Evaluation of inter-scorer and inter-laboratory reliability of the mouse epididymal sperm aneuploidy (m-ESA) assay," *Mutagenesis* Vol. 16, No. 3: 189-195, 2001.

\_\_\_\_\_ O31 Schmid et al., "Simultaneous Flow Cytometric Analysis of Two Cell Surface Markers, Telomere Length, and DNA Content," *Cytometry* 49: 96-105, 2002.

## OTHER INFORMATION

\_\_\_\_\_ O32 Schwerin et al., "Quantification of Y Chromosome Bearing Spermatozoa of Cattle Using In Situ Hybridization," *Molecular Reproduction and Development* 30: 39-43, 1991.

\_\_\_\_\_ O33 Shi et al., "Aneuploidy in human sperm: a review of the frequency and distribution of aneuploidy, effects of donor age and lifestyle factors," *Cytogenetics and Cell Genetics* 90: 219-226, 2000.

\_\_\_\_\_ O34 Timm et al., "Amplification and Detection of a Y-Chromosome DNA Sequence by Fluorescence In Situ Polymerase Chain Reaction and Flow Cytometry Using Cells in Suspension," *Cytometry (Communications in Clinical Cytometry)* 22: 250-255, 1995.

\_\_\_\_\_ O35 Timm et al., "Fluorescent *In Situ* Hybridization En Suspension (FISHES) Using Digoxigenin-qLabeled Probes and Flow Cytometry," *Biotechniques* Vol. 12, No. 3: 362-367, 1992.

\_\_\_\_\_ O36 Trask et al., "Fluorescence *in situ* hybridization to interphase cell nuclei in suspension allows flow cytometric analysis of chromosome content and microscopic analysis of nuclear organization," *Human Genetics* 78:251-259, 1988.

\_\_\_\_\_ O37 Tucker et al., "Extended depth of field and aberration control for inexpensive digital microscope systems" *Optics Express* Vol. 4, No. 11: 467-474, May 24, 1999.

\_\_\_\_\_ O38 van Dekken et al., "Flow Cytometric Quantification of Human Chromosome Specific Repetitive DNA Sequences by Single and Bicolor Fluorescent *In Situ* Hybridization to Lymphocyte Interphase Nuclei," *Cytometry* 11: 153-164, 1990.

\_\_\_\_\_ O39 van den Berg et al., "Detection of Y Chromosome by *In situ* Hybridization in Combination with Membrane Antigens by Two-Color Immunofluorescence," *Laboratory Investigation* Vol. 64, No.5: 623-628, 1991.

\_\_\_\_\_ O40 Wang et al., "A Novel Apoptosis Research Method With Imaging-Combined Flow Cytometer and HITC OR IR-125 Staining," *Cytometry (Clinical Cytometry)* 50: 267-274, 2002.

\_\_\_\_\_ O41 Weber-Matthieson et al., "Rapid immunophenotypic characterization of chromosomally aberrant cells by the new FICTION method," *Cytogenetics Cell Genetics* 63: 123-125, 1993.

\_\_\_\_\_ O42 Weber-Matthieson et al., "Simultaneous Fluorescence Immunophenotyping and Interphase Cytogenetics: A Contribution to the Characterization of Tumor Cells," *Journal of Histochemistry and Cytochemistry* Vol. 40, No. 2: 171-175, 1992.

### OTHER INFORMATION

\_\_\_\_\_ 043 Wietzorrekk et al., "A New Multiparameter Flow Cytometer: Optical and Electrical Cell Analysis in Combination With Video Microscopy in Flow," *Cytometry* 35: 291-301, 1999.

\_\_\_\_\_ 044 Wyrobek et al., "Smokers produce more aneuploid sperm than non-smokers," *The American Society of Human Genetics, 45<sup>th</sup> Annual Meeting*, A131: 737, October 24-28, 1995.

\_\_\_\_\_ 045 Wyrobek et al., "Detection of Sex Chromosomal Aneuploidies X-X, Y-Y, and X-Y, in Human Sperm Using Two-Chromosome Fluorescence In Situ Hybridization," *American Journal of Medical Genetics* 53: 1-7, 1994.

\_\_\_\_\_ 046 Wyrobek et al., "Fluorescence In Situ Hybridization to Y Chromosomes in Decondensed Human Sperm Nuclei," *Molecular Reproduction and Development* 27: 200-208, 1990.

---

Examiner's Signature

Date

\*Examiner: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

\*\*Documents cited herein marked with an “\*\*” have not previously been cited in a priority application relied upon herein for an earlier filing date. Copies of any so-noted Foreign Patent Documents and Other Information are enclosed for the Examiner's use.

MCK:elm  
2/3/10